Project Fact Sheet

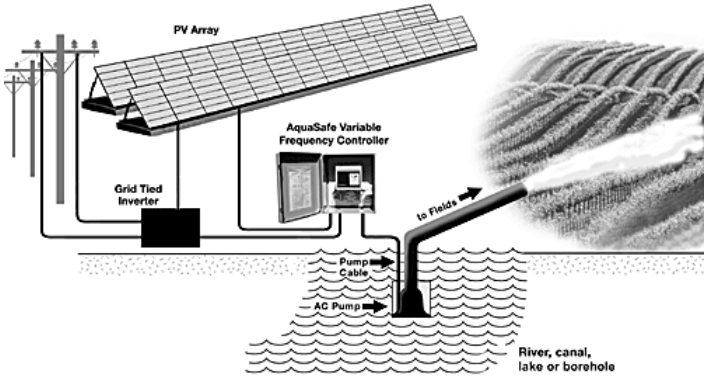
CEC / SMUD Regen Project 3.6 Remote Dispatch & PV Irrigation

GOALS

- Develop PV-powered irrigation systems designs and demonstration projects.
- Create the basis for a PV agriculture irrigation program in the Sacramento area.
- Test market for remote dispatch of PV systems in agricultural applications.
- Evaluate the need for battery storage for a variety of situations
- Design systems with optimized PV and battery sizing
- Evaluate irrigation requirements with respect to:
  - Pumping horsepower
  - Monthly hours of operation
  - Preferred time of irrigation
- Implement two demonstration projects – one grid connected and one grid-independent

PROJECT DESCRIPTION

Designs for two PV irrigation projects will be completed: one grid-connected and one stand-alone. Both designs will be implemented in demonstration projects. The demonstration projects will be monitored and evaluated. The demonstration projects will be used to test the PV-based spot market for electricity sales. Many agricultural wells in Sacramento County are fairly large, so the PV systems may be large enough produce sufficient electricity, if aggregated, to be of interest as spot-market generators.



BENEFITS TO CALIFORNIA

The project begins with an assessment phase: the gross market potential and short-term market potential for PV-powered irrigation will be evaluated. The suitability of PV irrigation as a generating source for sale of power to the ISO or elsewhere will be evaluated. Optimized system designs will be completed. Optimization will include battery-system sizing for non-grid-connected systems and an

attempt to minimize the cost of mounting hardware. Two demonstration projects will be completed. One of the systems will be grid connected and will not include a battery system. The other will not be grid connected (assuming such a project can be located), and may or may not include batteries, depending on the irrigation schedule provided by the property owner. It is likely that the latter system will be much smaller than the first. The demonstration projects will be used to test the market for PV-generated power on hot summer afternoons. Both demonstration projects will be monitored and evaluated. The monitoring consultant will prepare a final report.

FUNDING AMOUNT

Commission	$77,000
Match	$150,000
Total	$227,000

PROJECT STATUS

The bidding process to identify a technical contractor is currently underway.

FOR MORE INFORMATION

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